

## The HERB PROJECT : General Introduction

The HERB project (Hydrology, Ecology and Regional Biodiversity) has two major foci :

- (a) understanding the **hydrological** sensitivity of tropical montane environments to environmental change
- (b) understanding the **biological** sensitivity of the same environments to this change

The project has been running for only three years as a collaborative effort between King's College London, Instituto Humboldt, CIAT, Universidad del Cauca and other Colombian and UK organisations.

Most work so far has taken place in Nariño and Cauca.

The project combines **intensive field campaigns** to better understand particular processes in tropical montane environments (TMEs) such as :

- (i) occult precipitation (Gonzalez, Jarvis),
- (ii) productivity of tropical montane cloud forest (TMCF) (Letts),
- (iii) surface and subsurface hydrology of TMCF

*with*

dynamic spatially distributed hydrological **modelling** at the catchment scale using simple models (Rincon-Romero, Jarvis, Mulligan)

*and*

analysis of **impacts** for land use and climate change (Rubiano, Mulligan)

The overall purpose is to provide scientific information for **hydrological decision support**.

## Project Philosophy

- To develop long term but LOW COST environmental monitoring networks
- To carry out intensive studies to further understand hydrological processes in TMEs
- To produce dynamic, physically based models for **understanding** the complex outcomes of simple processes across variable landscapes
- A focus on understanding the hydrological sensitivity of landscapes to land cover, land use and climate
- Modelling to understand for management purposes not for predicting the outcome of particular events
  
- A focus on the synthesis and integration of data and models into **decision support systems** using experience developed in EU funded programs on decision support for land degradation in southern Europe